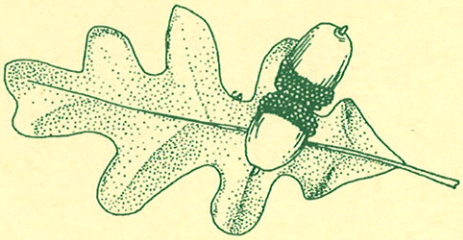
White Oak Nature Preserve in Clark State Forest

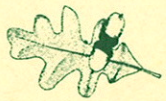


This 143-acre nature preserve contains a dry upland slope and moist cover with contrasting varieties of trees, shrubs and wildflowers. It is located in Clark State Forest, the oldest state forest in Indiana. In March 1903 state legislation provided for the purchase of 2,000 acres, which today, has increased to more than 24,000 acres.

The self-guiding trail is a 0.9 mile long loop with 25 marked stations beginning at the registration box.

IN ORDER TO PROTECT THE PRESERVE'S NATURAL VALUES, PLEASE: REMAIN ON THE TRAIL, PROTECT ALL PLANTS AND ANIMALS, KEEP THE AREA FREE OF LITTER, AND OBSERVE THE BAN ON HUNTING, FIRES, CUTTING, PICNICKING, CAMPING, HORSES AND VEHICULAR USE.

Note: illustrations are not drawn to scale



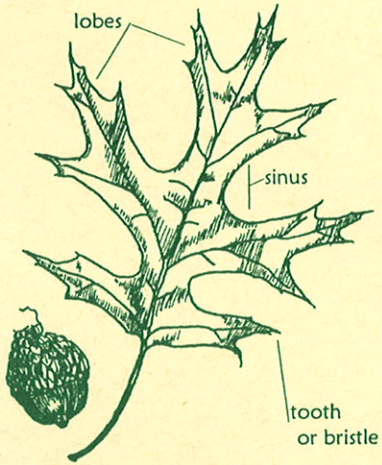
1 This nature preserve is named for the dominant tree here—the **white oak**. GRAY BARK DIVIDED BY VERTICAL FURROWS; LEAVES DEEPLY CUT INTO LOBES, WITHOUT SPINES ON THE ENDS (see above).

Boy Scouts working on the Forestry Merit Badge should measure this tree and 2 others to complete the requirements. Use a Biltmore stick.

2 Clark State Forest is managed for good forestry practices. Its **multiple use** practices include picnicking, camping and fishing.

The **nature preserve land** is reserved for walking, and observing nature. If this **white oak** was located in the forest management area, it would be marked for cutting. However, in this preserve everything will remain in its natural state.

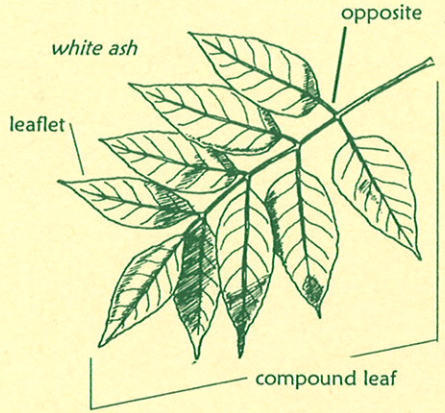
3 **Culling** dead or nonmarketable trees permits better growth of other nearby trees. But here in the preserve, this **scarlet oak**, about 40 feet off the trail, will remain until it dies, falls over, and decays. Thus organic matter is recycled into the soil. A lightening strike several years ago caused its center to decay.

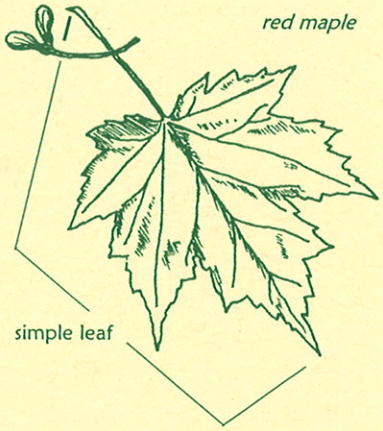


scarlet oak

American beech

4 Three feet in front of the post is an **American beech**. SMOOTH, GRAY BARK; TOOTHED, WAXY LEAVES ATTACHED ALTERNATELY ALONG THE STEM. Fifteen feet beyond is a **white ash**: OPPOSITE COMPOUND LEAVES. To the left of the beech is a **red maple**: OPPOSITE, SIMPLE LEAVES CUT INTO LOBES; TEETH ALONG ENTIRE MARGIN.





5 This **maple leaf viburnum** is an example of an **understory** shrub, and is common here. MAPLE-SHAPED LEAVES, hence the name; WHITE FLOWERS FAINTLY TINGED WITH PINK open in spring; THRIVES IN SHADE, where it will grow little more than 2 feet tall.

Virginia pine

6 As with all pines, this **Virginia pine** sheds its needles throughout the year, whereas hardwood trees lose their leaves each year. It is native in the "Knobstone" area in Floyd, Clark, and Washington Counties only, but has been planted or naturally seeded from plantations elsewhere. TWO NEEDLES IN EACH CLUSTER.

7 Located 30 feet from the trail is a **shagbark hickory**. SHAGGY PLATES OF GRAY BARK; COMPOUND LEAVES WITH 5 LEAFLETS. The nuts are relished by squirrels.

shagbark hickory

8 Oaks and hickories create the oak-hickory forest type. Here is a **pignut hickory.** DARK GRAY BARK NOT SHAGGY; COMPOUND LEAF HAS 5 LEAFLETS WHICH ARE SMALLER THAN THE SHAGBARK; THE NUTS ARE ALSO SMALLER AND HAVE THIN HUSKS.

pignut hickory

9 Another oak here, the **Chestnut oak**, belongs to the white oak group, but the leaves, on the sprouts to the left, DO NOT HAVE DEEPLY CUT LOBES. It is a slow grower, and is found in large numbers on the high dry knobs. DARK GRAY BARK, WITH VERTICAL DEEP FURROWS BETWEEN WIDE, HARD RIDGES; LARGE ACORNS.

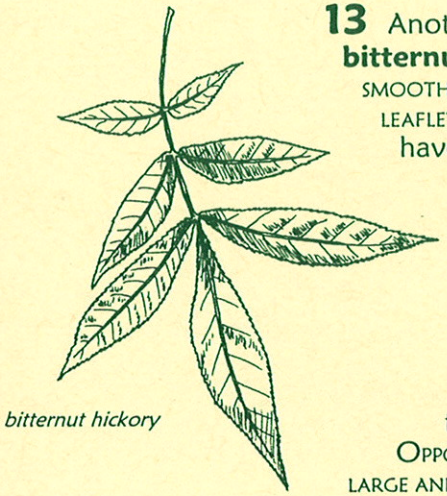
chestnut oak

10 **Recycling** of decayed plant and animal matter returns their nutrients to the soil to be used again by the forest. An example of recycling is this **scarlet oak** that died in 1985. It is being allowed to decay naturally.

11 This streambank exposes the **soil profile** of **Rockcastle silt loam**. The silty clay topsoil (surface layer) is no more than 1 - 3 inches thick, and overlays the subsoil in light, olive-yellow and gray horizons. The soils here are types found at lower elevations of the "Knobstone" area and are derived from sandstone, siltstones, and shales. Small rocks and finer materials eroded from higher elevations can be seen in the streambed.

12 Please do not cut initials in the trunk of this **American beech**—it permits diseases and curtails growth. SMOOTH, GRAY BARK; SIMPLE LEAVES WITH PROMINENT PARALLEL VEINS (see page 3).

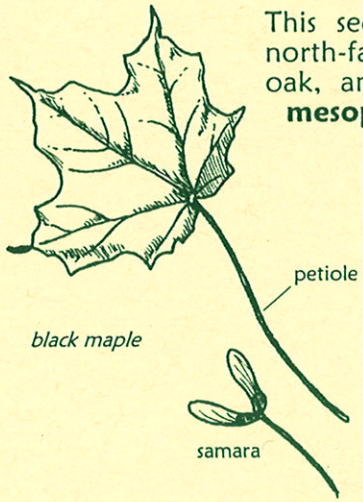
The green fronds of **Christmas ferns** grow along the trail, as you walk to the next station.



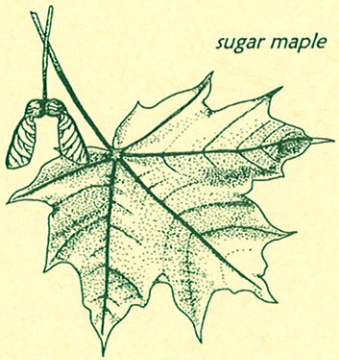
bitternut hickory

13 Another hickory found here is this **bitternut hickory**. LIGHT GRAY, RELATIVELY SMOOTH BARK; COMPOUND LEAVES WITH 5 - 9 LEAFLETS. The small thin-shelled nuts have a bitter taste.

14 There are 2 **hard maple** species in this woods, both tapped for sugar water: **black maple** has larger and thicker leaves than **sugar maple**. OPPOSITELY ATTACHED, SIMPLE LEAVES WITH 3 LARGE AND 2 SMALL LOBES.

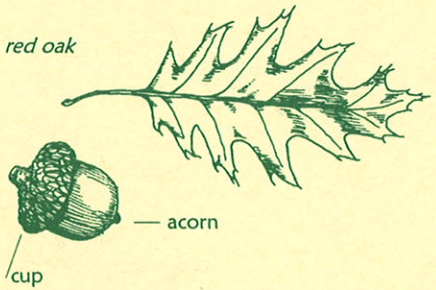


This section of the trail is on a cooler, north-facing slope, where beech, maple, oak, and hickory mixtures are found—a **mesophytic** (moist) **forest type**.



sugar maple

15 Here in this cool, moist site is the **red oak**. LIGHT, SHINY STREAKS OF BARK ON THE UPPER TRUNK; SIMPLE, ALTERNATE LEAVES WITH POINTED LOBES WHICH ARE NOT DEEPLY CUT; THE ACORN CUP COVERS NO MORE THAN 1/4 OF THE ACORN.

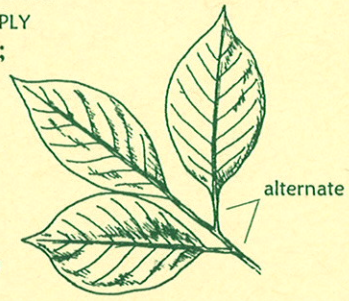


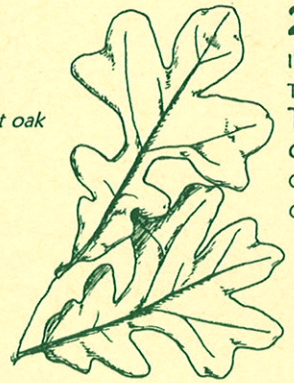
16 As you walk along the trail, look and listen for signs of **animal life**, such as tracks, dens, nests, calls or songs, shed snake skins, feathers, and hair caught in the bark of trees. Please leave your finds where they are so others can see them too.

17 This small tree that grows in moist ground in the understory is the **blue beech** (hornbeam or muscle tree). It never reaches a height of the larger trees. SMOOTH, GRAY BARK WITH HARD RIDGES; ALTERNATE SIMPLE LEAVES WITH FINE TEETH ALONG THE MARGINS.

18 This **diseased** white oak has a light patch of bark 4 feet above the ground. "Smooth patch" or "white patch" disease is caused by a fungus. It does not kill the tree, but often causes constrictions of the trunk.

19 One of the earliest trees to change color in the fall, the **black gum** turns bright red. DARK BROWN BARK, FAIRLY SMOOTH NOW, WILL BECOME DEEPLY FURROWED INTO RECTANGULAR RIDGES WHEN OLDER; ALTERNATE ELLIPTICAL LEAVES WITH SMOOTH MARGINS. Flowers are highly favored by bees, juicy fruits are consumed by many birds and mammals.





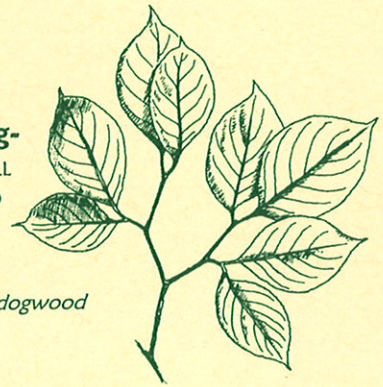
20 The **post oak** LEAVES ARE EXTREMELY VARIABLE IN SHAPE, BUT GENERALLY HAVE 2 LARGE LOBES MIDWAY TO THE TIP AND 2 SMALLER LOBES TOWARD THE BASE. This cross-like shape gives the tree its other common name, Crucifixion Oak. GROWS CROOKEDLY; GRAY, DEEPLY FURROWED BARK. IT IS SLOW GROWING.

21 A small understory species, the **serviceberry**, also called juneberry, shadbush, and amelanchier, is the first to bloom in the spring. ALTERNATE, SIMPLE LEAVES HAVE FINE TEETH ALONG MARGINS; CLUSTERS OF WHITE FLOWERS.

22 The forest floor is often covered with small shrubs. **Round leaf greenbrier**, in front of the post, is a common shrub here. While heavy stands make foot travel difficult, it provides protective cover for birds. SQUARE STEM WITH SHORT SPINES; ROUND-SHAPED LEAVES.

23 Here again is a **red maple**, (review station 4). It prefers moist soils. Do you see the differences between these leaves and the other maples you have seen today?.

24 A blooming **flowering dogwood** is a sure sign of spring. SMALL TREE; SIMPLE, OPPOSITE LEAVES; TWIGS AND BRANCHES APPEAR TO TELESCOPE EACH OTHER.



25 Fifteen feet from the trail is a **black oak**. DARK BROWN, FURROWED BARK; LEAVES HAVE 3 LARGE, DEEPLY CUT LOBES AND 2 SMALLER LOBES; THE ACORN CUP COVERS ABOUT 1/2 OF THE ACORN.

continue ⟶

This ends the self-guiding trail. We hope you have enjoyed your walk as well as the surrounding beauty and diversity Nature has to offer.

Improving your vocabulary:

acorn - the fruit of the oak, not including the cup.
alternate - not opposite to each other on the axis but borne at regular intervals at different levels.
compound (see also *pinnate*) - composed of 2 or more similar parts united into 1 whole.
compound leaf - 1 divided into separate leaflets.
deciduous - falling away at the close of the growing season.
leaflet - 1 of the divisions of a compound leaf.
lobe - any segment of a part, especially if rounded.
petiole - the support of a leaf.
pinnate - having leaves divided into leaflets or segments along a common axis as in the ash and hickory.
samara - a thin, flat, winged fruit with a single seed as in the elm, maple, and ash.
serrate - having sharp teeth pointing forward
simple leaf - composed of an individual leaf not divided into separate leafelets (opposite of *compound leaf*).
sinus - the cleft or space between 2 lobes (see *lobe*).

Directions: From Henryville, in Clark Co., go north 0.9 miles on U.S. 31, then turn left on the main forest road. Park in the picnic grounds on the right after crossing the I-65 overpass. The preserve is across the road (south) from the picnic grounds parking lot.

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